# (19) World Intellectual Property Organization International Bureau



### <u> 1800 Kanadan dan kabupaten bankan bankan bankan kabupaten bankan bankan bankan bankan bankan bankan bankan ba</u>

(43) International Publication Date 12 May 2005 (12.05.2005)

**PCT** 

# (10) International Publication Number WO 2005/042430 A1

(51) International Patent Classification7:

C04B 12/04

(21) International Application Number:

PCT/US2004/036438

(22) International Filing Date:

2 November 2004 (02.11.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/516,825

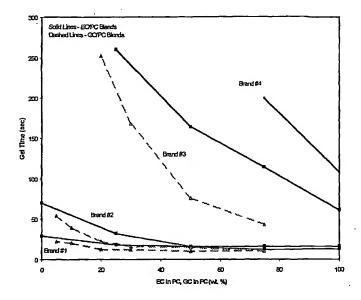
3 November 2003 (03.11.2003) U

- (71) Applicant (for all designated States except US): HUNTS-MAN PETROCHEMICAL CORPORATION [US/US]; 7114 North Lamar Blvd., Austin, Texas 78752 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CLEMENTS, John, H. [US/US]; 8108 Miller Falls Drive, Round Rock, Texas 78681 (US). DARRAGAS, Katty [BE/BE]; Hoge Dumpel 9, B-9700 Oudenaarde (BE). KLEIN, Howard, P. [US/US]; 5200 Welcome Glen, Austin, Texas 78759 (US).

- (74) Agents: WHEWELL, Christopher, J. et al.; Huntsman LLC, Legal Department, 7114 North Lamar Blvd., Austin, Texas 78752 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

#### (54) Title: ALKYLENE CARBONATES AS WATER GLASS CURE ACCELERANTS



(57) Abstract: Provided herein are catalysts useful in the curing of cementitious mixtures, which catalysts comprise one or more alkylene carbonates in combination with glycerin carbonate. Through use of a catalyst according to the present invention, cementitious mixtures containing sodium silicate may be cured at low temperatures because the catalysts of the invention function well at low temperatures, even though they contain ethylene carbonate, a material whose melting point of 36°C otherwise precludes its use as a cure accelerant for silicates. Figure 1 is a graphical representation of the results shown in Table II.



## WO 2005/042430 A1



#### Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.